



DIGITALIZING THE PROCESS OF MONITORING THE ACTIVITY OF DEPARTMENTS IN HIGHER EDUCATION INSTITUTIONS

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Abstract

The modern world level of development of information and communication technologies is such that the creation of a national system compatible with the integration of the infrastructures of the world information space and the national information and computing network in the republic is an important factor in the effectiveness of the national economy, management, science and education. These problems are very complex and at the same time urgent for our republic. The results of the implementation of economic, structural and other changes that are being carried out now depend on how and in what time frame the problems related to informatization are solved in the republic.

In the educational system of our country, special attention is paid to the issue of bringing up a mature generation capable of creative work, forming worthy individuals who will have their place in the society in the future.

Communication technologies define the methods, methods and means of human interaction with the outside world. In these communications, the computer has its place, providing convenient, individual, diverse, high intellectuality in the interaction of communication objects. The purpose of the harmonious use of information and communication technologies is the adaptation of a person to the information society.

ICT is becoming the main tool not only for professional activities, but also for everyday life. The main directions of pedagogical and ICT technologies are the improvement of education in various directions at the present time.

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1. INTRODUCTION

The following roles, tasks and duties of a person in the digital environment competencies are important. Digital economy Adapted to its capabilities and limitations, daily from its benefits use and feel minimal discomfort from the digital shock of the future constantly adapting to new conditions throughout his life A student with disabilities in health is digital biological-psychological-social, replaced by technologies is a person. Digital Democracy, Digital Government, Accountability with Digital Media citizen interacting with. The digital economy (including in education, culture, research, defense and security) who has the necessary competence for effective work in the conditions of the digital environment in his work and as a learner and professional today's and tomorrow's workforce turning to digital tools, user. The creator of the future digital economy is a mathematician, programmer, expert in cognitive research, pedagogue, organizer and manager, entrepreneur and investor. An important quality of a person compatible with the digital economy is a person who is equipped with digital technologies and uses them in his daily and professional activities in the digital information environment; digital technologies are used wherever they are useful and necessary. The necessary elements of a competitive digital economy are:

The above applies to various areas of professional activity cover all human roles and competencies with options model of recipient digital competencies (description). The digital environment of citizen, worker activity is the environment where learning activity and registration, registration of this activity and its results takes place. System for checking the fulfillment of the requirements of the Model (certification of digital competences) in human activity. Knowledge of information technologies and the main models of their application is not enough for the effective activity of a citizen and a professional in the 21st century. 21st century competencies are needed, including: critical and creative thinking, initiative and responsibility, flexibility, innovation, business acumen, emotional intelligence. These competencies can be conditionally grouped into 3 blocks. Digital competences - reliable and effective use of information and communication technologies (ICT) for work, leisure and communication. Initiative and entrepreneurial competencies – the ability to transform ideas into action through creativity, innovation and risk assessment, as well as project planning and management skills.

Softskills – building cross-cultural network communications (social and professional), learning and development skills and so on etc. Digital recording of human activity, registration of activity to objectively assess its efficiency and productivity Enables Model Compatibility by using:

1. Official evaluation regulations, processes and criteria.
2. Their work is recorded, recorded and evaluated expert people.
3. Recording the activity of all members of the society is voluminous automated data collection systems. On the educational and professional activities of a person and their assessment The information collected in the digital environment is his individual professional digital constitutes history. Based on it, digital records, certificates, diplomas, on the achievement of certain educational qualities and qualifications certificates, descriptions, portfolio, resume (CV) and employment records are created. Digital economy, including life improve quality, reduce human costs of living, educational directions of citizens with limited health opportunities optimization as a positive element of the digital economy envisages the use of their human potential. It envisages the following interrelated directions in the field of education: in all stages of education and in all structures of the educational process graduate image, educational standards, programs, assessment systems, formation of educational content, methods and methods of educational activity. The 21st century, which is included in the variant model of digital competence Competences continuously general education, professional education, additional in the fields of professional education and professional and daily activities of a person is formed in the process. Digital and network in the making technologies are used. This or that of the educational process elements of digital technologies (in similar situations in life (applicable) refusal to apply requires special analysis and justification is enough. Individualization, openness and results are provided, including:

➤ for every citizen, including a person with disabilities the optimal learning outcomes that can be achieved;

- support the motivation of each learner, providing the opportunity to maximize individual abilities and talents providing educational elements;
- early identification and diagnosis of difficulties and problems in education, their compensation and elimination is the main element in providing these descriptions of the educational process network is an informational learning environment.

In such an environment, educational activities and the participants of the educational process interact, the progress and results of educational activities are recorded. Full-time, part-time and part-time education takes full advantage of the educational environment of distance learning technologies and the interaction between participants, ownership of a common system of final attestation, and differentiation (primarily teaching) by the size of the educational organization's resources spent on each learner. Based on the information collected in the environment (with the use of large volumes of data on the entire educational system), individual achievements and difficulties are diagnosed, individual educational directions are forecasted and planned, relative results (individual growth) and absolute (compliance with external criteria) are evaluated, students, their families, descriptions are given to existing and prospective employers. The digital information educational environment is integrated into the digital environment of citizen and worker activity. The information recorded in it is professional digital is part of history. Special examination procedures are only special used in situations: of the results of attestation for the state and society in particular importance; from the assessment of his activity in the information environment certification hoping to show better results at the request of the sender. From individual tasks and final sections of content to integrated open systems of educational content of a certain level, supplemented by courses and modules of the formation of specified competencies and internal corporate educational resources, a reserve of open general education, general development online resources and professional education resources is formed and constantly replenished. In all attestation processes, it is important to evaluate the human competences provided by digital technologies, working in the information environment. Traditional models of humanitarian pedagogy include: team, design, research, playful learning activities and new digital to expand the possibilities of forming models to advances in cognitive science in the direction of technology application Based on a wide range of promising research and development activities is increased. Central integrated subject area in general education (mother tongue and along with literature, mathematics and informatics) information and is a technology covering communication technologies. All learners are expected to acquire new literacy skills held: maintenance and strengthening of health, general physical and mental development, preservation and improvement of living environment, optimal economic behavior, logical thinking and communication, general cultural foundations (including natural sciences, national elements). The specific tasks of the professional education system are the establishment of relations with the research structure and development with business structures. In particular, it is ensured that this activity is taken into account when evaluating the production and business activities of learners and teachers, as well as the effectiveness of the activities of the participants of the educational process (including copyrights to intellectual products, as in the activity in publishing works, or, more importantly, the volume of tools involved in a start-up). A grant support program is provided to attract students to gainful employment in the IT field. Special attention will be paid to the latest directions of the developers of digital economy technologies, starting with general education, children's additional education and circle work. Including the model is developed: in the field of mathematics and informatics, in the field of cognitivism (mathematics and pedagogy), in the field of taking into account achievements within the formal education system. The system of teacher training and additional professional education includes practical work in educational organizations that intensively use digital technologies, as well as internships in various organizations that use advanced models of the use and creation of digital technologies. Grant for participation in the best foreign study programs support is provided. Additional education of an adult person becomes a lifelong activity, an indicator of the quality of life, provides an opportunity to easily and effectively enter new elements of the digital world, to use these elements to enrich and satisfy personal needs. Popularization of the digital world, various forms of advertising, contests and incentives are used in its adoption. Education is promoted by the image of the learner and in the media by "success stories", competitions and grants. In order to effectively use the human

potential for the digital economy, the opportunity to engage in effective activities is provided for the widest range of citizens, taking into account their skills and mobility. Flexible forms of employment, including complete remote forms are provided (from sending a resume and applying for employment to presenting the results of the work performed). The specified range of citizens as equal participants includes: students and teachers, pensioners, disabled, women engaged in child care. Digital economy among digital economy professionals the whole process of forming society, model of digital competence Pedagogical staff who provide implementation and own it themselves will have a special role. The implementation of this role is initially supported by professionals who do not have professional pedagogical training. Appropriate conditions will be created for working in the digital economy, including attracting foreign specialists to key, competitive positions. The indicated directions of implementation of the program in the field of labor relations are supported by an appropriate regulatory framework. In particular, work is carried out to constantly update professional standards and improve the quality of qualification assessment based on the analysis of the worker's activity in the information environment. It works with the support of the initial budget, providers and consumers of individual courses and sets of courses (modules), will be built around several branches of continuing education that unite certifiers (specialists and organizations that conduct objective assessment of competencies), navigators (specialists and organizations that provide information and professional support to consumers). These services are provided using modern network technologies. "Traditional" educational organizations must interact with these networks as providers of courses and practices, as well as as their consumers. A necessary element of such a system is the mechanism of objective assessment of qualifications and specific skills (competencies), where the state performs the task of quality control of assessment activities and content. The results of such assessment are primarily used by citizens to build their own educational orientations.

2. SYSTEM OF ONLINE MONITORING OF PERSONAL WORK PLANS IMPLEMENTATION OF EMPLOYEES

By monitoring the performance of professors in the higher education system and the fulfillment of personal work plans, it allows to further increase the efficiency of work. In order to implement the above processes, it is appropriate to develop a system of online monitoring of the fulfillment of personal work plans of professors in the higher education system.

There are a number of problems with the traditional way of conducting personal work plans of professors. In particular:

- Their monitoring in HEIs with many employees;
- Errors in keeping generalized reports;
- Collection of reporting processes and their verification;
- Determination of personal work plan fulfillment;
- Preparing a report at the end of the academic year and searching for the work done during the academic year;
- The complexity of identifying and evaluating the performance of those who perform well.

In order to eliminate these problems, an automated system for monitoring the work done by professors and students of the department was developed (Table 1).

Table 1. Existing roles in the system.

No	Role	Description
1	admin	System manager
2	rector	Rector
3	dean	Dean
4	head	Head of the department
5	prof	Professor is a teacher

This system was developed in the Python programming language, which is considered a modern programming language, and was selected as a database management system.

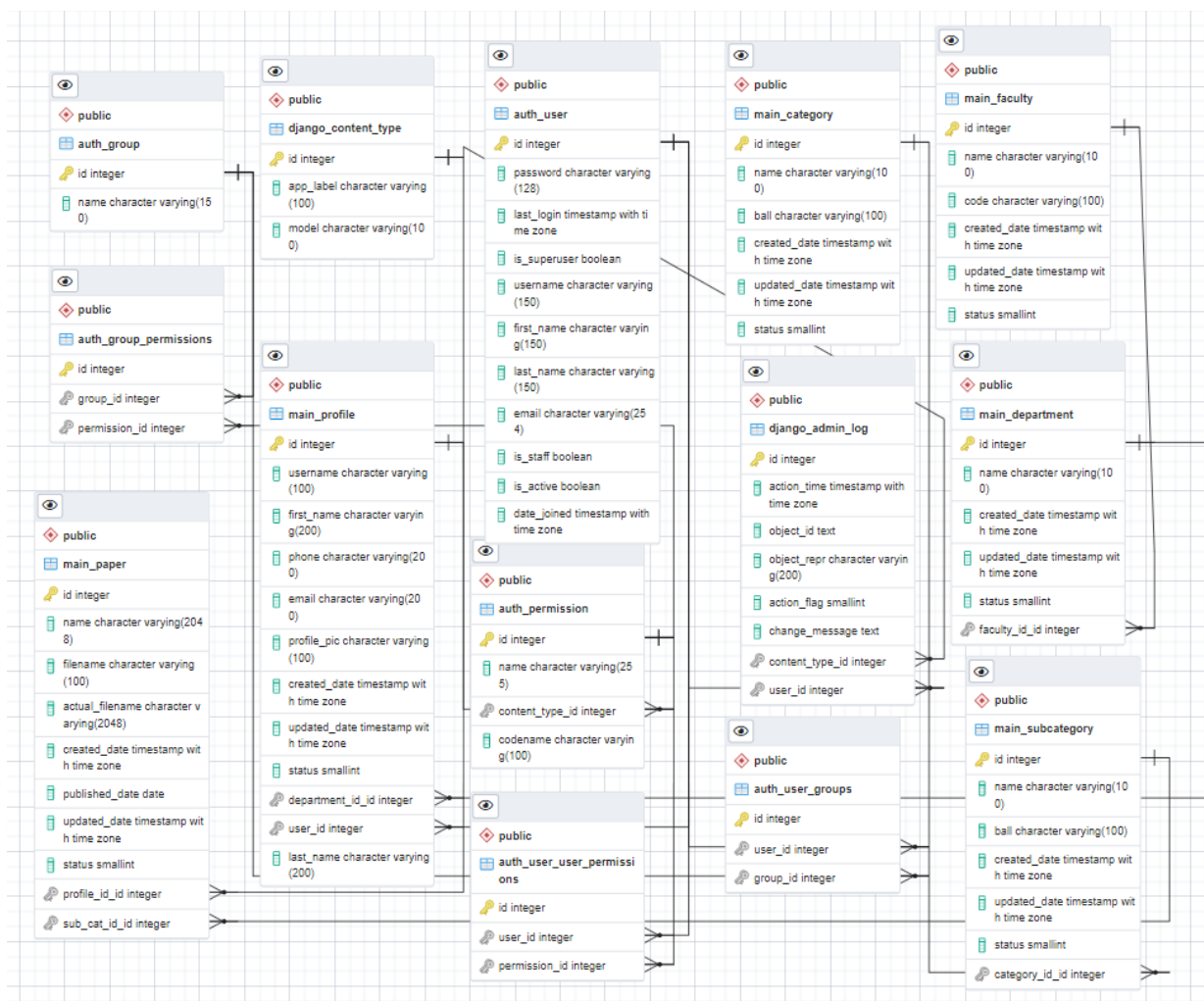
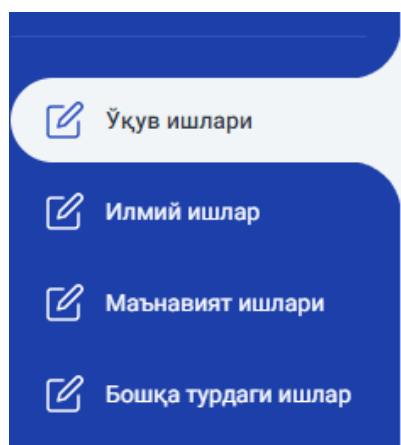


Figure 1. Database overview.

3. ANALYSIS AND RESULTS

Logging in to the system is done through each professor's own account. All actions performed in this case belong to this user. After entering the system, they can enter information about the module in four (Figure 2).



Picture 2. The relevant modular list in the professor teacher profile.

Figure 3. Data entry and their list window on the academic work module.

By filling in the fields shown in this window, users can enter relevant information during the academic year and use it as a report at the end of the year.

FIO	O'quv	Ilmiy	Ma'naviy	Boshqa	Jami ball	Ҳаракат
Hakimjon Zaynidinov	13.0	19.5	9.0	0	41.5	Edit Delete
Ibrohim Yusupov	20.0	0	0	0	20.0	Edit Delete
Salimjon Mamajonov	5.0	3.0	10.0	0	18.0	Edit Delete
Hasan Abdullayev	15.0	0	0	0	15.0	Edit Delete
Jahongir Modullayev	10.0	0	0	0	10.0	Edit Delete
Muslimjon Kuchkarov	0	0	0	0	0	Edit Delete
Sarvar Maxmudjanov	0	0	0	0	0	Edit Delete
Jonibek Jurayev	0	0	0	0	0	Edit Delete
Begzod Xayrullayev	0	0	0	0	0	Edit Delete

Figure 4. Table of evaluation of teachers of the respective department by the head of the department.

4. CONCLUSION

The convenience is that any entered information is automatically visible to the above users in real time. Based on this, the head of the department or the dean allows to monitor the work performed and performed by the professors of the faculty and/or the department during the year.

By implementing such information systems in higher education institutions, it becomes easier to collect and summarize reports. Through the development of this system, the Department of Information Technologies of TATU named after Muhammad al-Khorazmi has been automated.

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